

BUSINESS MEETING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Business Meeting)
)
_____)

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

WEDNESDAY, JUNE 4, 2008

10:04 A.M.

Reported by:
Peter Petty
Contract Number: 150-07-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMISSIONERS PRESENT

Jackalyne Pfannenstiel, Chairperson

Arthur H. Rosenfeld

Jeffrey D. Byron

Karen Douglas

STAFF and CONTRACTORS PRESENT

Melissa Jones, Executive Director

Arlene Ichien, for Chief Counsel Chamberlain

Marni Weber, for Legislative Director Smith

Harriet Kallemeyn, Secretariat

Ron Yasny

Ken Koyama

Chris Graillat

Andrea Gough

Sarah Pittiglio

Bradley Meister

Arthur Soinski

Norman Bourassa

PUBLIC ADVISER

Nick Bartsch

ALSO PRESENT

Gale Higgins

Maria De Lourdes Jimenez-Price

Sacramento Municipal Utility District

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P R O C E E D I N G S

10:04 a.m.

CHAIRPERSON PFANNENSTIEL: Good morning.

This is the Energy Commission business meeting.

Please join me in the Pledge of Allegiance.

(Whereupon, the Pledge of Allegiance was
recited in unison.)

CHAIRPERSON PFANNENSTIEL: We have no
changes to the agenda, and no consent calendar
today.

So we start item 1, possible approval of
an amendment to modify the project description in
three air quality conditions of certification for
the SMUD Cosumnes Power Plant based on the
redesigned cooling tower. Good morning.

MR. YASNY: Good morning. My name is
Ron Yasny; I'm the Compliance Project Manager for
the SMUD Cosumnes Power Plant.

This project was filed September 13th of
'01, and approved September 9th of 2003. And
phase one has been operational since February 28,
2006.

This amendment was received November 7,
2007. And we received three requests for copies
of the staff analysis and order. The staff

1 analysis was mailed to those interested parties,
2 as well as being posted and docketed on April
3 22nd. And the public comment period expired May
4 6th of '08. And we have not received any public
5 comment.

6 This petition to amend is necessary
7 because it modifies three conditions relating to
8 the water that is sprayed in the cooling tower.
9 Some of that water evaporates, leaving the
10 dissolved solids that were in the water suspended
11 in the air.

12 These minor increases are caused because
13 of higher water flows through the cooling tower,
14 higher flows than when were first considered.

15 Also different from the original design
16 is the size and configuration of the cooling
17 tower. It was discovered that the cooling tower
18 needed to be slightly larger, and there would be
19 no room for a reserved ninth cooling fan in the
20 tower. This amendment also modifies the project
21 description to address those changes.

22 Based on these facts staff recommends
23 Commission approval to modify the conditions that
24 I've described, as shown in the amendment and the
25 order provided to you, for your approval.

1 CHAIRPERSON PFANNENSTIEL: Thank you.
2 We also have two people who would like to speak on
3 this, I assume that they're there. Gale Higgins,
4 Acting Manager of SMUD Power Generation and Maria
5 De Lourdes Jimenez-Price from SMUD.

6 MR. HIGGINS: Yes. My name is Gale
7 Higgins and I would just like to thank the staff
8 and the Commission for opportunity and time that
9 you have spent in looking at this project. It is
10 a very important project to the Sacramento area.
11 And it's proven to help meet our load requirements
12 and all of our requirements to meet other control
13 area.

14 I want to thank the staff again for all
15 the time they have spent on this project.

16 CHAIRPERSON PFANNENSTIEL: Are there
17 other questions of either staff or SMUD on this?
18 Commissioner Byron.

19 COMMISSIONER BYRON: Ms. Price, did you
20 have something you wanted to say?

21 MS. PRICE: No. I just wanted to
22 clarify that it's the Sacramento Municipal Utility
23 District Financing Authority, it's a joint power
24 authority, that owns the CPP.

25 CHAIRPERSON PFANNENSTIEL: Thank you.

1 COMMISSIONER BYRON: We reviewed this on
2 the Siting Committee, and we would like to
3 recommend the staff's recommendation full
4 Commission review to revise the -- or make the
5 proposed modifications to the conditions of
6 operation.

7 So, I move the item.

8 COMMISSIONER DOUGLAS: I'll second the
9 item.

10 CHAIRPERSON PFANNENSTIEL: All in favor?

11 (Ayes.)

12 CHAIRPERSON PFANNENSTIEL: It's
13 approved, thank you.

14 MS. PRICE: Thank you.

15 MR. HIGGINS: Thank you.

16 MR. YASNY: Thank you.

17 CHAIRPERSON PFANNENSTIEL: Item 2,
18 Possible approval of a royalty agreement ROY-07-
19 002 with Global Geothermal, which has taken over
20 Exergy, Inc.'s loan agreement 500-86-001. Thank
21 you. Mr. Koyama.

22 MR. KOYAMA: Good morning. My name is
23 Ken Koyama, and I manage the energy generation
24 research office in the research and development
25 division.

1 We are asking for your approval to amend
2 the terms of the agreement with Exergy, Inc. to
3 restructure the payback of their loan agreement
4 with us.

5 In 1987 the Energy Commission funded
6 Exergy for \$2.25 million under the old energy
7 technology management program to demonstrate and
8 test their Kalina Cycle technology.

9 This demonstration has proved successful
10 and the company made some sales triggering the
11 repayment provision of the agreement.

12 To date, Exergy has paid \$412,500 to the
13 Energy Commission. However, Exergy did not and
14 currently does not have the resources to fully
15 commercialize the technology and sought
16 investments from other sources.

17 A larger company, Global Geothermal,
18 Limited, provided loans beginning in the late
19 1990s in anticipation of the successful
20 commercialization of the technology. These loans
21 from GGL now exceed Exergy's assets. And Exergy
22 is looking to restructure the loan or seek
23 bankruptcy.

24 GGL is willing to take ownership of the
25 intellectual property of the technology if they

1 can reduce the Energy Commission's repayment
2 provisions. They have expertise with this
3 technology and believe that they can advance and
4 commercialize this technology further.

5 GGL is willing to pay royalties up to
6 the balance of the principal amount of the loan to
7 the Energy Commission over the next five years.

8 So, in conversations with GGL and
9 Exergy, and with our attorneys, we believe that
10 this amendment will allow us to recover up to the
11 \$2.25 million loan. Under the original terms of
12 the agreement that's currently standing right now,
13 we believe that we will get nothing more in
14 royalties, and the deal between GGL and Exergy
15 will fall through.

16 So we request approval for this
17 amendment to this agreement.

18 CHAIRPERSON PFANNENSTIEL: Thank you,
19 Ken. So I'm understanding then that the amount
20 that's in front of us now, which is a significant
21 reduction from what we had originally agreed to,
22 is an amount negotiated with the parties -- with
23 the purchasing party, DGL?

24 MR. KOYAMA: That's correct.

25 CHAIRPERSON PFANNENSTIEL: And the

1 conclusion that was reached in this negotiation is
2 that if we get the loan principal back without
3 interest, that's the best we're going to do?

4 MR. KOYAMA: That's our opinion, yes.

5 CHAIRPERSON PFANNENSTIEL: Further
6 questions, Commissioners?

7 Okay, is there a motion for this?

8 COMMISSIONER ROSENFELD: I move the
9 item.

10 COMMISSIONER BYRON: Second.

11 CHAIRPERSON PFANNENSTIEL: All in favor?

12 (Ayes.)

13 CHAIRPERSON PFANNENSTIEL: It's
14 approved.

15 MR. KOYAMA: Thank you.

16 CHAIRPERSON PFANNENSTIEL: Item 3,
17 possible approval of contract 180-07-001 for
18 \$20,000 with Rockman, Etc., Inc., to cofund a
19 study of the PG&E Solar Schools Program to
20 determine its effectiveness and assess the
21 participants' attitudes towards science and
22 energy, in particular energy efficiency and
23 renewable energy. Good morning.

24 MS. GRAILLAT: Good morning. My name is
25 Chris Graillat and I'm with the media and public

1 communications offices.

2 And I'm requesting approval for \$20,000
3 for the contract with Rockman. The PG&E Solar
4 Schools Program has -- the study will focus on
5 nine schools that are in the program, and the
6 program focuses on teacher training for renewables
7 and classroom kids for hands-on exploration of
8 energy and energy concepts.

9 This year -- in 2000 they trained about
10 1000 teachers, and they expect to train about 1000
11 this year. And they also do a 1 kilowatt solar
12 panel installation. They had about 40 schools
13 last year, and 40 schools this year. And they
14 also have granted about \$250,000 for the Bright
15 Ideas grants.

16 So the object of the study is to assess
17 the effectiveness of the program; and also to
18 assess attitudes and changes regarding energy,
19 renewable energy, environmental education and
20 related items.

21 So, we are requesting approval of the
22 contract.

23 CHAIRPERSON PFANNENSTIEL: I see that
24 this was initiated by a grant from the Bechtel
25 Foundation --

1 MS. GRAILLAT: Right.

2 CHAIRPERSON PFANNENSTIEL: -- that
3 kicked this off. How much was that grant, do you
4 know?

5 MS. GRAILLAT: The Bechtel Foundation
6 has given \$15,000 towards the study. They've
7 already begun the study, and this will allow
8 Rockman to expand the study a little bit more,
9 expand the scope and involve more schools.

10 CHAIRPERSON PFANNENSTIEL: And do we
11 actually have a study plan, that we've looked at,
12 from Rockman so we know what they're going to be
13 doing? I mean is this something we've actually
14 gotten to the point of, you know, looking over
15 their shoulder on how they're planning to do this?

16 MS. GRAILLAT: We have a basic outline
17 of what they intend to address in the study.
18 They're still assessing what kind of instruments
19 would be the best to use for the study.

20 I met with the consultant yesterday for
21 the first time, but we're going to be meeting
22 again as they further refine how they're going to
23 approach the study. They've selected the schools,
24 and that's kind of the major accomplishment so
25 far.

1 CHAIRPERSON PFANNENSTIEL: I mean, I
2 think it's a wonderful idea. I think it does make
3 sense to assess how we're doing. I just want to
4 make sure that the results of this study are
5 applicable not just to these nine schools, and not
6 just in the PG&E service territory, but, in fact,
7 to the whole state where we're putting a lot of
8 money into renewables and energy efficiency.

9 I just want to make sure that we can
10 take the findings here and use it to help us
11 refine our programs throughout the state. Is that
12 intended?

13 MS. GRAILLAT: That's the goal of the
14 study, yes. Because it is -- it appears to be a
15 good program, but it has not undergone an official
16 evaluation yet. So this will allow us to have the
17 data to determine how effective the program is.
18 And to possibly use it as a model for other
19 programs throughout the state, since it obviously
20 only occurs in PG&E territory.

21 CHAIRPERSON PFANNENSTIEL: Great. Other
22 questions, Commissioners? Commission Byron.

23 COMMISSIONER BYRON: Well, you know, my
24 own assessment, having gone into a number of
25 elementary schools and spoken about energy when my

1 wife was on our local school board, is that the
2 kids understand renewable energy. It's the adults
3 that I think we should be spending our time
4 educating.

5 (Laughter.)

6 COMMISSIONER BYRON: Of course, I'm in
7 favor of this. I think it's a wonderful
8 opportunity.

9 CHAIRPERSON PFANNENSTIEL: Further
10 questions, comments? Is there a motion?

11 COMMISSIONER BYRON: I'll move the item.

12 COMMISSIONER ROSENFELD: I'll second.

13 CHAIRPERSON PFANNENSTIEL: All in favor?

14 (Ayes.)

15 CHAIRPERSON PFANNENSTIEL: Thank you,
16 Chris.

17 MS. GRAILLAT: Thanks.

18 CHAIRPERSON PFANNENSTIEL: Item 4,
19 possible approval of purchase order 07-409.00-028
20 for \$96,720 with KYBRO Consulting to modify the
21 energy consumption data management system to
22 accommodate data collected under revised data
23 collection regulations and provide support for the
24 system, including ongoing maintenance for the
25 ECDMS database and associated applications. Good

1 morning.

2 MS. GOUGH: Good morning. I'm Andrea
3 Gough with the electricity supply analysis
4 division.

5 I'm asking for the approval of this
6 purchase order to modify the database known as
7 ECDMS. It's our main database that we store
8 historic electricity and natural gas consumption
9 data in support of our forecast and other analysis
10 the Commission does.

11 CHAIRPERSON PFANNENSTIEL: Are there
12 questions, comments, concerns?

13 COMMISSIONER BYRON: We reviewed this in
14 the Electricity and Natural Gas Committee and
15 approved it. So, I recommend it to the
16 Commission.

17 CHAIRPERSON PFANNENSTIEL: Is there a
18 second?

19 COMMISSIONER ROSENFELD: Second.

20 CHAIRPERSON PFANNENSTIEL: All in favor?

21 (Ayes.)

22 CHAIRPERSON PFANNENSTIEL: Thank you,
23 Andrea. It's approved.

24 MS. GOUGH: Thank you.

25 CHAIRPERSON PFANNENSTIEL: Item 5,

1 possible approval of contract 500-07-042 for
2 \$1,200,000 with the Regents of the University of
3 California Scripps Institute of Oceanography to
4 develop detailed projections of how global climate
5 change might lead to temperature, wind velocity,
6 humidity, microclimate and other changes within
7 California. Good morning.

8 MS. PITTIGLIO: Good morning,
9 Commissioners. My name is Sarah Pittiglio; I'm
10 with the Public Interest Energy Research program.

11 I'm here today to request your approval
12 for an interagency agreement with the Scripps
13 Institute of Oceanography at the University of
14 California at San Diego, to develop a new set of
15 climate projections for California for the
16 century.

17 The climate projections will utilize
18 three regional climate models with geographical
19 resolution of six-by-six miles. This is the
20 highest level of spatial resolution ever attempted
21 for climate change studies. The model will also
22 provide outputs on a daily basis.

23 The climate projections are realistic
24 climate scenarios of what could happen with our
25 climate in California for the rest of the century.

1 The climate scenarios will have enough temporal
2 and spatial resolution to allow for more in-depth
3 impact and adaptation studies, so provide the
4 foundation for our research program.

5 We will use this new set of climate
6 projections for the 2010 biennial climate change
7 impact study that we will prepare for the Governor
8 and the Legislature via the Climate Action Team.
9 As you know, PIER leads the preparation of these
10 biennial studies for the Climate Action Team.

11 I respectfully request your approval for
12 this contract with Scripps.

13 CHAIRPERSON PFANNENSTIEL: Is this the
14 principal vehicle that we, in California, are
15 using then to assess mitigation questions and
16 issues?

17 MS. PITTIGLIO: Yeah, it's the
18 foundation of our research program here. And
19 other agencies and researchers will be using this.
20 The Department of Water Resources already stated
21 that they would use it for future state water
22 plans.

23 CHAIRPERSON PFANNENSTIEL: And when do
24 you think it will be available to us?

25 MS. PITTIGLIO: I think -- well, in

1 2009.

2 CHAIRPERSON PFANNENSTIEL: Thank you.

3 Other questions?

4 COMMISSIONER ROSENFELD: This came
5 before our committee and I move it.

6 CHAIRPERSON PFANNENSTIEL: Is there a
7 second?

8 COMMISSIONER DOUGLAS: I'll second it.

9 CHAIRPERSON PFANNENSTIEL: All in favor?

10 (Ayes.)

11 CHAIRPERSON PFANNENSTIEL: Thank you,
12 it's approved.

13 MS. PITTIGLIO: Thank you.

14 CHAIRPERSON PFANNENSTIEL: Item number
15 6, possible approval of contract 500-07-046 for
16 \$870,000 with the U.S. Department of Energy,
17 Lawrence Berkeley National Laboratory, to improve
18 demand control ventilation specifications in Title
19 24, conduct research to better understand how much
20 ventilation is needed for healthy environments in
21 schools, and to quantify the potential energy
22 savings in California, both from DCV systems in
23 office buildings, and by improving public school
24 ventilation rates. Good morning.

25 MR. MEISTER: Good morning,

1 Commissioners. I'm Bradley Meister. I'm here
2 today to request approval of an \$870,000 contract
3 with Lawrence Berkeley National Lab.

4 This contract will improve our
5 understanding of ventilation in two important
6 areas. The first project will develop the
7 information needed to evaluate and, as necessary,
8 suggest revised specifications in Title 24
9 building standards to improve our understanding of
10 the in-place performance of demand control
11 ventilation sensors, and to determine causes of
12 large measurement errors.

13 The second project will conduct research
14 to help us better understand how much ventilation
15 is needed for healthy environments in schools.

16 These projects will also quantify
17 potential energy savings in California, both from
18 demand control ventilation systems in office
19 buildings and by improving public school
20 ventilation rates. The potential savings could be
21 large.

22 Staff recommends approval of this
23 contract.

24 CHAIRPERSON PFANNENSTIEL: I guess my
25 only question was really not substantive, but

1 procedural. Why this is two projects on one
2 contract. Normally we see a project per contract.

3 MR. MEISTER: I guess because they were
4 both in the ventilation area, we felt they were
5 complementary.

6 CHAIRPERSON PFANNENSTIEL: Okay. Other
7 questions?

8 COMMISSIONER BYRON: How long does it
9 take -- I notice this is a 37-month contract, and
10 I don't know how long it will take for results on
11 this particular contract. But which version of
12 the building standards of Title 24 standards would
13 this find its way in?

14 MR. MEISTER: It would be the 2011
15 standards.

16 COMMISSIONER BYRON: It does take time,
17 doesn't it?

18 CHAIRPERSON PFANNENSTIEL: But that's
19 actually the next set of building standards that
20 we would be doing anyway.

21 COMMISSIONER BYRON: Right.

22 COMMISSIONER ROSENFELD: This came
23 before our committee, and I move the item.

24 COMMISSIONER BYRON: I'll second it.

25 CHAIRPERSON PFANNENSTIEL: All in favor?

1 (Ayes.)

2 CHAIRPERSON PFANNENSTIEL: Thanks.

3 Item 7, possible approval of six grant
4 awards totaling \$5,521,833 under the September 4,
5 2007 combined cooling, heating and power systems
6 competitive solicitation. Good morning.

7 DR. SOINSKI: Good morning,
8 Commissioners. My name is Art Soinski. I'm the
9 Team Lead for environmentally preferred advanced
10 generation in the Public Interest Energy Research
11 program.

12 I'm here today to request your approval
13 for funding of six contracts for combined heat and
14 power applications. These were selected from 22
15 proposals that were submitted under a competitive
16 solicitation.

17 These projects will improve the cost
18 effectiveness and performance of combined heat and
19 power systems as an energy efficiency measure for
20 industrial facilities and buildings. By improving
21 energy efficiency, they will reduce emissions of
22 carbon dioxide.

23 Three of the projects are for
24 demonstrations of CHP systems using microturbine
25 generators. Two of the projects will improve the

1 fuel-to-electric conversion efficiency of
2 microturbines used in CHP systems from
3 approximately 30 percent to the range of 38 to 40
4 percent.

5 And one project will improve the
6 operation and control of reciprocating engines in
7 CHP systems. Reciprocating engines being the most
8 commonly used prime mover for small CHP systems.

9 They have a common feature that all
10 projects will use the ASERTTI protocols, a set of
11 nationally accepted performance testing and
12 reporting methods that were developed by the
13 Energy Commission, the U.S. Department of Energy,
14 and other states, but especially the State of New
15 York, under the ASERTTI flag organization.

16 I'll be happy to answer any questions
17 either about the process or about the projects.

18 CHAIRPERSON PFANNENSTIEL: Thank you.
19 Are there questions?

20 COMMISSIONER BYRON: Yes.

21 CHAIRPERSON PFANNENSTIEL: Commissioner
22 Byron.

23 COMMISSIONER BYRON: Well, maybe more a
24 comment than a question. Mr. Soinski and Mathias,
25 brief me on this project. I'm very interested,

1 obviously, in these. When I read these high
2 percentages of efficiency I get rather excited
3 because of the reduction in GHG and polluting --
4 criteria pollutants, as well as the efficient use
5 of natural gas.

6 And Mr. Soinski is a little more jaded
7 than I am, I suppose. And he peels me off the
8 ceiling and reminds me that these are stated or
9 proposed efficiencies. But they're still
10 extraordinary. And I find all these projects to
11 be worthy of the funding that we're providing to
12 them.

13 And Mr. Soinski also indicated that he
14 does these about on an annual basis, these kinds
15 of awards.

16 DR. SOINSKI: Correct.

17 COMMISSIONER BYRON: So, may I ask, for
18 next year what's your thinking on the kinds of
19 projects that you go after in the next
20 solicitation?

21 DR. SOINSKI: This will be -- I guess
22 you could say this was our third round of
23 solicitation on combined heat and power. And the
24 motivation was the recognition of CHP as an
25 important contribution to satisfy the loading

1 order, and possibly moving up in the loading order
2 from distributed generation, which is now I guess
3 like the fourth item in the loading order or
4 higher.

5 I think probably the next direction that
6 we will be moving in, because we're now looking at
7 packaged systems, looking at marketing packaged
8 systems by boiler manufacturers and furnace
9 manufacturers. So instead of looking at the
10 electrical generation side of the equation first,
11 looking at the thermal side of the equation.

12 And the reason for doing that is that
13 looking at the self-generation incentive program,
14 the systems that were installed early on have not
15 performed as well as expected. I think part of it
16 is because there was not this good use of thermal
17 energy. And to my mind, if you don't use the
18 thermal energy, then you really don't have a good
19 CHP system, and you're not very efficient.

20 So that's one reason why I mention the
21 ASERTTI testing and reporting protocols, because
22 we want standardized methods to assess the fact
23 that if someone claims 87 percent as one did,
24 that, you know, they either demonstrate it that
25 they achieved that or they did not achieve it.

1 And we know exactly where we are.

2 Going forward to finally get to the
3 answer to your question, I think we've looked a
4 microgrids and smart grids and making systems
5 ready for those new applications so that we can be
6 more acceptable to future installations to get the
7 industry, the CHP industry and the packaging
8 industry, aware of the fact that the most
9 promising, to my mind, applications of distributed
10 generation and CHP will be in more integrated and
11 grid support functions than they are today.
12 Rather being primarily, you know, stand-alone.

13 So that's what I see as being the next
14 major area of emphasis as being one of the
15 performance requirements.

16 COMMISSIONER BYRON: Good. Well, I
17 certainly move the item. I'd ask you to please
18 keep me informed about your research activities in
19 this area.

20 DR. SOINSKI: Thank you.

21 COMMISSIONER ROSENFELD: And this, of
22 course, came before the R&D Committee, and the R&D
23 Committee likes it, so I second it.

24 CHAIRPERSON PFANNENSTIEL: All in favor?
25 (Ayes.)

1 CHAIRPERSON PFANNENSTIEL: Thanks.

2 Item 8, possible approval of contract
3 500-07-033 for \$300,000 with White Box
4 Technologies, Inc., to review available weather
5 data and develop a new set of standard California
6 climate thermal zone weather files for use in the
7 mandated Energy Commission Title 24 compliance and
8 New Solar Homes Partnership incentive calculation.
9 Good morning.

10 MR. BOURASSA: Good morning,
11 Commissioners, Director and attendees. I'm Norman
12 Bourassa, Team Lead for the PIER buildings end use
13 efficiency program.

14 This proposed contract with White Box
15 Technologies will provide the California Energy
16 Commission with a greatly needed update of the
17 official California thermal zones -- California
18 climate thermal zone; we also call those the CTZ
19 weather files, which are used for Title 24
20 compliance in New Solar Homes Partnership
21 incentive calculations, as you just said. The
22 total cost will be \$300,000 over two years.

23 The CTZ files were first developed in
24 1976 with the last revisions being done on them in
25 1992. These newly updated weather data will

1 provide improved accuracy in the building energy
2 computer simulations for the Energy Commission
3 applications since the data will include the most
4 recent weather data, and more detailed solar
5 radiation data than are currently being used.

6 In addition, this research will identify
7 methodologies that will facilitate the keeping of
8 the standard CTZ weather files up to date to
9 current weather conditions. And we're also going
10 to explore methodologies to use them for climate
11 change weather scenarios.

12 The project is included in the 2007-08
13 PIER buildings budget. The work scope was
14 developed in collaboration with the standards
15 office. The R&D Committee has approved the
16 project, and I'll just defer to any questions you
17 might have.

18 CHAIRPERSON PFANNENSTIEL: Are these
19 weather files available for public use?

20 MR. BOURASSA: Oh, yes. The weather
21 files are actually used very extensively by the
22 energy analysis community for doing statewide
23 impacts or just for general energy analysis and
24 design assistance for new construction. And
25 they're very lacking in that area because they are

1 so far out of date.

2 CHAIRPERSON PFANNENSTIEL: I know that
3 there are federal weather files. How do ours fit
4 in with what the federal government has, --

5 MR. BOURASSA: NREL distributes --

6 CHAIRPERSON PFANNENSTIEL: -- whether
7 it's NOAA or --

8 MR. BOURASSA: -- what's called the TMY2
9 files, which have been recently updated to TMY3.
10 That stands for typical meteorological year. They
11 provide, I believe, about 12 stations in
12 California. I'm just going by memory.

13 They're fundamentally exactly the same
14 kind of weather files as what we produce. We have
15 selected 16 climate zones to cover California's
16 climate regimes. The federal files do not match
17 up with the same weather stations as ours. So
18 they aren't used for our Title 24 compliance.

19 However, they are used as extensively as
20 ours are with general energy analysis. Their TMY3
21 files were just recently updated and are now using
22 30 years, the most recent 30 year data. Both data
23 sets are based on 30 years of averaged weather
24 data.

25 CHAIRPERSON PFANNENSTIEL: But there are

1 alternative ways of getting at the same
2 information?

3 MR. BOURASSA: Exactly right. And we're
4 going to explore new ways of doing that. The 30-
5 year weather sampling methodology actually has
6 proven to be very appropriate for California
7 because it tends to flatten out the peaking nature
8 of our weather. And this research project is
9 going to look at methodologies that will maintain
10 the long-term averaging, as well as not suppress
11 the peak weather storm events that we --
12 especially heat storm events that we have here in
13 California.

14 CHAIRPERSON PFANNENSTIEL: Why did we
15 decide to do our own set of weather files rather
16 than relying on the federal?

17 MR. BOURASSA: We've always done our
18 own. The national work through NREL doesn't pay
19 attention well enough to the specific needs of
20 California. They use batching methods which
21 average and pay more attention to the GSA climate
22 regimes. We're in region 9, which is a very very
23 general climate regime that lumps us in with
24 Alaska and Hawaii, of all places.

25 Also their methodology doesn't look at

1 our 16 climate zones, which are the official zones
2 for --

3 CHAIRPERSON PFANNENSTIEL: Well, I
4 understand, but I thought you said they has 12
5 climate zones as opposed to our 15 -- 12 --

6 COMMISSIONER ROSENFELD: Twelve
7 stations.

8 MR. BOURASSA: Well, they have roughly
9 12 stations --

10 CHAIRPERSON PFANNENSTIEL: Twelve
11 stations in California, right.

12 MR. BOURASSA: See, the difference is
13 they look at a single station. We actually choose
14 a representative station in a climate zone and pay
15 attention to the climate regime across a much
16 larger range so that when you're doing compliance
17 in a city that isn't close to whatever the weather
18 station is, you're actually choosing -- you're
19 doing weather that is more representative of the
20 entire climate zone.

21 A perfect example might be climate zone
22 4, which is the Bay Area. The current weather
23 station is Oakland, which is the best fit between
24 the cooler temperatures of San Francisco and the
25 warmer temperatures of San Jose.

1 In this project we're actually going to
2 look at better methodologies to actually be able
3 to adjust the weather file by zip code to the
4 actual location of the building that is going to
5 be -- the compliance is being calculated for.

6 At present, with the current weather
7 files, they are the second version that was
8 adjusted in 1982, they're using a dry bulb
9 adjustment methodology.

10 We'll get a little bit technical here.
11 Temperature is measured with a dry bulb
12 temperature and wet bulb. Wet bulb being the
13 measurement of the evaporative capacity of the
14 air.

15 The two of them work together and
16 they're connected. It's called zygometrics. What
17 we did is we have a methodology where we're
18 pushing the dry bulb temperature around to make it
19 closer to what we feel is the temperature regime
20 of a certain location. But it destroys the whole
21 relative humidity relationship of the weather
22 file.

23 And that's what we're currently using.
24 And we want to use a better methodology.

25 CHAIRPERSON PFANNENSTIEL: No, I

1 understand why we like our methodology better. It
2 is, after all, ours. But I'm just probing if we
3 didn't have the \$300,000 to improve our climate
4 files or weather files, whether we could lean on
5 the federal government if they do a similar
6 thing, --

7 MR. BOURASSA: We actually --

8 CHAIRPERSON PFANNENSTIEL: -- if others
9 use the federal government. You said that about
10 equal number of parties use their as ours. In
11 other words, there are a lot of applications --

12 MR. BOURASSA: In the energy analysis
13 community, yes. With respect to the way we do our
14 energy code compliance, we are unique in the way
15 we do it in California.

16 But what we will be drawing upon is from
17 the exact same source raw data that they are
18 using. But we will be conditioning it into
19 weather files, CTZ weather files, that fit our
20 methodologies of doing compliance.

21 CHAIRPERSON PFANNENSTIEL: Thank you.
22 Other questions?

23 COMMISSIONER ROSENFELD: Yeah. Norm, I
24 do have a question. These weather files will be
25 used to design and size heating and cooling

1 equipment for buildings which are going to be
2 around for 50 years or so.

3 MR. BOURASSA: Right.

4 COMMISSIONER ROSENFELD: Well, maybe the
5 HVAC system will get refit after 30 years or
6 something like that. But, anyway, what do you do
7 about extrapolation of the future, heat islands.
8 L.A. is still getting hotter by 1 degree
9 Fahrenheit every ten years.

10 MR. BOURASSA: Um-hum.

11 COMMISSIONER ROSENFELD: So, in 35 years
12 it's quite a few degrees, 3 or 4 degrees.

13 Do you do anything about extrapolating
14 ahead for 40 years or so? Are there clues on the
15 tape about how, if you want to be perspicacious,
16 you can look ahead?

17 MR. BOURASSA: Currently there isn't.
18 But we want to look at more robust ways of doing
19 precisely what you said.

20 In the past what a modeler will do is
21 basically go into the weather file and just tweak
22 the dry bulb temperature up, like I described
23 earlier. And that has been done. As a matter of
24 fact, the principal investigator, Joe Wong, of
25 this contract, has a report that he did for us

1 within the last year and a half where he did that.
2 He took the IPCC average temperature projections
3 and did an analysis of the building stock for the
4 U.S. actually. It wasn't done for us, I believe
5 it was done for the DOE. But, that proves to be a
6 very coarse way of predicting future weather
7 conditions.

8 So we have a task in this project to
9 identify robust methodologies that will be able to
10 adjust temperatures upwards without affecting the
11 relative humidity, the humidity regimes, as I
12 described earlier.

13 COMMISSIONER ROSENFELD: Okay.

14 CHAIRPERSON PFANNENSTIEL: Other
15 questions?

16 COMMISSIONER ROSENFELD: This came
17 before the R&D Committee, of course, and I move
18 the item.

19 COMMISSIONER BYRON: Second.

20 CHAIRPERSON PFANNENSTIEL: All in favor?

21 (Ayes.)

22 CHAIRPERSON PFANNENSTIEL: Thank you.

23 MR. BOURASSA: Thank you.

24 CHAIRPERSON PFANNENSTIEL: Item 9,
25 minutes. I understand we don't have a quorum of

1 attendees for the May 21st business meeting, so we
2 will pass on that and pick them up next time.

3 Committee discussions. Anything that
4 anybody wants to raise, Commission Committee
5 discussions? None.

6 Chief Counsel report. Arlene.

7 MS. ICHIEN: Arlene Ichien for Bill
8 Chamberlain. Nothing to report this morning.

9 CHAIRPERSON PFANNENSTIEL: Thank you.
10 No closed session or anything else?

11 MS. ICHIEN: No closed session this
12 morning.

13 CHAIRPERSON PFANNENSTIEL: Good job.
14 Send Bill away more. Thanks.

15 Executive Director report. Ms. Jones.

16 EXECUTIVE DIRECTOR JONES: Good morning.
17 I would just like to remind people about the I-5
18 fix. The Governor issued an executive order. We
19 have been working with our deputy directors and
20 our managers to create the kind of flexibility in
21 schedules that has been called for in the
22 executive order.

23 We also have put information on our
24 internet if you need to know what's going on with
25 the I-5 fix. And we have included a link to that

1 information on our website for all of our hearings
2 and notices. We have shifted workshops and
3 hearings to start at 10:00 to accommodate travel
4 both from the airport and from the Bay Area.

5 so, just a reminder about that. And
6 that's all I have to report today.

7 CHAIRPERSON PFANNENSTIEL: Thank you.
8 Leg Director report. Marni, what's happened with
9 the election?

10 MS. WEBER: Oh, it was a very exciting
11 night last night. A lot of changes. We'll be
12 sending out a full report later today. In the
13 interest of time today I will not give details on
14 everything.

15 We are seeing a lot of changes in a lot
16 of the committee assignments. So I'm sure you'll
17 be interested in all of that.

18 One interesting committee is that the
19 Assembly natural resources committee will only
20 have like two returning members. So it will be
21 interesting to see what changes happen there.

22 Last Friday, June 30th, was the deadline
23 for bills to get out of their House of origin.
24 When the session started last year we were looking
25 at about 145 bills that were energy-related.

1 After the deadline now we're looking at about 83.
2 And some of those did not directly impact the
3 Energy Commission, so we're only looking at about
4 40 bills that we're doing active analysis on,
5 which is a much more manageable number, thank
6 goodness.

7 Also, on Tuesday the Secretary of State
8 officially qualified the Renewable Energy
9 Initiative for the November ballot. This is the
10 Solar and Clean Energy Act of 2008. It will
11 require all utilities to generate 20 percent of
12 their power from renewable energy by 2010, 40
13 percent by 2020, and 50 percent by 2025.

14 The measure would also transfer all
15 kinds of new responsibilities and authority to the
16 Energy Commission, including some that are
17 currently now residing with the Public Utilities
18 Commission. So we're going to be doing a full
19 analysis, taking a very close look at this. If
20 the voters approve it in November, there will be a
21 lot of changes around the Energy Commission.

22 That's all for today.

23 CHAIRPERSON PFANNENSTIEL: And I
24 understand that has a fair amount of opposition
25 from the environmental community?

1 MS. WEBER: Yes, it does.

2 CHAIRPERSON PFANNENSTIEL: Any questions
3 of Marni? Any discussion? Thank you.

4 MS. WEBER: Thank you.

5 CHAIRPERSON PFANNENSTIEL: Public
6 Adviser report.

7 MR. BARTSCH: Madam Chair, Members, Nick
8 Bartsch, Public Adviser's Office. Nothing new to
9 report to you this time.

10 CHAIRPERSON PFANNENSTIEL: Thank you,
11 Nick.

12 Any public comment? Anybody on the
13 phones, Harriet?

14 Okay, we'll be adjourned.

15 (Whereupon, at 10:42 a.m., the business
16 meeting was adjourned.)

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CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter,
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IN WITNESS WHEREOF, I have hereunto set
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